

FOREST HEALTH ALERT

From the Missouri Department of Conservation

Defoliating Caterpillars



Bagworms (*Thyridopteryx ephemeraeformis*)

Tree species affected: Bagworm caterpillars prefer eastern red cedar, junipers, arborvitae, pine, and spruce but will also feed on deciduous trees such as maple, oak, black locust, and sycamore.

Concerns: Defoliation by caterpillar feeding, especially on evergreens; spindle or cone-shaped bags hanging from trees (Figure 1).

Description: Bagworms are a common, native moth found throughout North America. Caterpillars carry a silken bag and attach clipped foliage as camouflage. Caterpillars enlarge the bag as they grow. Eggs overwinter in bags and tiny caterpillars hatch late the following spring. Unchecked, these caterpillars can completely defoliate small trees.

Recommendation: Prior to spring, remove and destroy the previous year's bags from trees. During the summer, remove bagworms by handpicking and dropping into soapy water. If handpicking is not practical, spray insecticides when caterpillars are still small (usually early to mid-June). Recommended insecticides contain *Bacillus thuringiensis kurstaki*, beta-cypermethrin, cyfluthrin, or spinosad.



Pennsylvania DCNR, Bugwood.org

Bagworm hanging from a branch.

Eastern Tent Caterpillars (*Malacosoma americanum*)

Tree species affected: Caterpillars feed on many deciduous trees, including wild plum, black cherry, apple, crabapple, and hawthorn.

Concerns: Defoliation by caterpillar feeding; unsightly silken tents in tree branch crotches during early spring (Figure 2).

Description: Eastern tent caterpillar is a moth native to the United States. Caterpillars hatch from overwintering eggs in early spring and build silken tents in the branch crotches of trees. Caterpillars feed outside tents during mild weather. Mature caterpillars leave tents and seek sheltered places to pupate but cause no further feeding damage.

Recommendation: Remove tents and drop caterpillars into soapy water. To encourage predation by wildlife, tear open webs using a long stick with a nail driven through the end. Insecticidal control is generally not necessary. If insecticides are used, spray trees in early spring when tents are first noticed using a product containing *Bacillus thuringiensis kurstaki*, spinosad, neem oil, acephate, bifenthrin, cyfluthrin, permethrin, or zeta-cypermethrin.



William H. Haffard, Bugwood.org

Tent made by eastern tent caterpillars.



Questions? Contact your local forester with the Missouri Department of Conservation.

Find contact information for your county and more at mdc.mo.gov.

April 2019

Fall Webworm (*Hyphantria cunea*)

Tree species affected: Fall webworm caterpillars feed on over 120 tree species. Walnut, hickory, pecan, and persimmon are the most common host species in Missouri.

Concerns: Defoliation by caterpillar feeding; tents made of silk webbing cover branch tips mid-summer through late fall (Figure 3).

Description: Fall webworm is a common, native moth found throughout North America. This caterpillar is often confused with the eastern tent caterpillar, but fall webworm tents are seen later in the year—from mid-summer through late fall. Fall webworm tents surround branch tips and caterpillars feed within the webbing. Tents start small but may eventually encompass 2-3 feet of a branch. During high populations, multiple branches on a single tree can be affected. Small trees may be entirely enclosed in webbing.

Recommendation: Fall webworm control is rarely necessary as damage is mostly aesthetic and typically does not affect tree health. To encourage predation by wildlife, rip open webs to expose caterpillars. If insecticides are used, spray trees when tents are first noticed in late summer using a product containing *Bacillus thuringiensis kurstaki*, spinosad, acephate, or zeta-cypermethrin. Be sure that insecticidal sprays penetrate tents.



Missouri Dept. of Conservation

Fall webworm tents on a pecan tree.

Walnut Caterpillar (*Datana integerrima*)

Tree species affected: Walnut caterpillars feed on walnut, pecan, and hickories.

Concerns: Defoliation by caterpillar feeding (Figure 4); masses of caterpillar skins on the lower trunks of host trees.

Description: Walnut caterpillar is a native moth most commonly noticed from mid-July through September. Walnut caterpillars change in appearance as they develop—from light green to reddish-brown, and finally black with long, white hairs. Caterpillars feed in large groups—often high in tree canopies. Walnut caterpillars descend from the canopy to the lower trunk to molt in a group, leaving behind a mass of hairy skins stuck to the bark.

Recommendation: Control of walnut caterpillar is rarely necessary as damage is mostly aesthetic. Walnut caterpillar, like other defoliating caterpillars, has many natural enemies that keep populations in check. Insecticides can harm natural enemies.



Jerry A. Payne, Bugwood.org

Walnut caterpillars feeding on walnut.

Be on the lookout for the Gypsy Moth!

Caterpillars of the invasive gypsy moth (*Lymantria dispar*) eat the leaves of over 300 tree and shrub species, with oak leaves being their favorite. If you notice dramatic tree defoliation in April or May, keep an eye out for these distinct caterpillars (right). Report possible sightings to your local MDC Forester or send photos to Forest.Health@mdc.mo.gov.



Wikipedia